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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/876,611
Filing Date: June 07, 2001
Appellant(s): SNODGRASS ET AL.

Ronald J. Schoenbaum
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed February 5, 2007 appealing from the
Office action mailed October 20, 2006

(1) Real Party in Interest

- The real party of interest in the present application is Amazon.com, Inc.

(2) Related Appeals and Interferences

- The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

- The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

- The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

- The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

- The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

- The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

- 6356879 Aggarwal et al. 3-2002
- 6307965 Aggarwal et al. 10-2001

- .Zaiane et al. "Discovering Web Access Patterns and Trends by Applying OLAP and Data Mining Technology on Web Logs" Proceedings of the Advances in Digital Libraries Conference, April 22-24 1998, pp. 19-29

(9) Grounds of Rejection

- The following ground(s) of rejection are applicable to the appealed claims:

- ***Claim Rejections - 35 USC § 112***

Claims 46 and 59 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: Claim 46 is directed towards displaying the items on a referring web site. Claim 38 from which Claim 46 depends describes no mechanism by which interaction of any type can occur on the referring website.

- ***Claim Rejections - 35 USC § 103***

- Claims 38-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aggarwal et al. (U.S. Patent Number: 6,356,879) in view of Zaiane et al. ("Discovering Web Access Patterns and Trends by Applying OLAP and Data Mining Technology on Web Logs, Proceedings of the Advances in Digital Libraries Conference, P. 19, April 22-24, 1998)

Claims 38, 46, 48, and 50, 52, 53, 59, 61, 62, and 65: Aggarwal and Zaiane disclose a computer-implemented method and system, comprising:

- a. Aggarwal discloses tracking users on-line browsing behavior for use on a web site that hosts a catalog of items (Col 2, lines 9-14). While Aggarwal does not explicitly state that this browsing behavior includes tracking the web site from which the user was referred when a user selects a link provided on the referring web site, the analogous teachings of Zaiane disclose that information regarding the referring web site is standard data that is collected and logged by web servers. Standard web mining tools such as Getstats, Analog, Microsoft Interse Market Focus, and WebTrends data regarding the referring web site and include it in standardized reports (Page 1, Col 1 Paragraph 3 through Page 1, Col 2, Paragraph 2). Therefore, it would have been obvious to one of ordinary skill at the time the invention was made to include this information in the browsing behavior disclosed by Aggarwal. One would have been motivated to include browsing behavior information regarding the referring site, because the data is readily available and provides additional quantifiable data from which Aggarwal can use to improve customer characterizations and personalize recommendations to peer groups.

- b. Aggarwal discloses identifying a group of users based on browsing and purchasing behavior. While Aggarwal does not explicitly state that information regarding the referring site is part of the disclosed browsing behavior, the analogous art of Zaiane discloses that browsing behavior commonly logged by web servers include information such as referring web sites, URL requests, and browser type (Page 1, Col 1 Paragraph 3 through Page 1, Col 2, Paragraph 2). Therefore it would have been obvious to one of ordinary skill at the time the invention was made to include this information in the browsing criteria disclosed by Aggarwal. One would have been motivated to include browsing behavior information regarding the referring site, because the data is readily available and provides additional quantifiable data from which Aggarwal can use to improve customer characterizations and personalize recommendations to peer groups. When the referring information is included as browsing behavior Aggarwal discloses using this information to identify a group of users based on this information.(Aggarwal: Col 5, lines 6-17)
- c. Aggarwal discloses collecting user activity data reflective of preferences of particular users for particular items represented in the electronic catalog of items, said user activity data

encompassing actions of both members and non-members of said group of users. (Aggarwal: Col 7, lines 1-16)

- d. Aggarwal discloses identifying a set of items that correspond to group preferences of said group of users, wherein the set of items is identified based on the collected user activity data of both the members and the non-members of said group of users. (Aggarwal: Col 5, lines 6-17 and Col 7, lines 18-42)
- e. Aggarwal discloses causing the set of items to be displayed (a) on the target web site to users who are referred thereto from a referring web site in said subset of referring web sites, and/or (b) on a referring web site in said subset of referring web sites. (Aggarwal: Col 8, lines 50-57)

The disclosed sections of the prior art are capable of performing the steps multiple times and can be executed when there is a single referring site or a number of referring sites.

Claim 39: Aggarwal and Zaiane disclose the method of Claim 38, wherein identifying the set of items comprises programmatically analyzing the collected user activity data of the members and non-members of the group to identify items that are significantly more popular among the group of users than in the general user population. (Aggarwal: Col 7, lines 1-55)

Claim 40: Aggarwal and Zaiane disclose the method of Claim 38, wherein identifying the set of items comprises programmatically analyzing the collected user activity data of the members and non-members of the group to identify items for which the group's preferences are significantly greater than the general user population's preferences. (Aggarwal: Col 7, lines 1-55)

Claim 41 and 54: Aggarwal and Zaiane disclose the method of Claim 38 and system of claim 53 respectively, wherein the user activity data comprises data descriptive of item purchases made by users. (Aggarwal: Col 2, lines 34-39)

Claim 42 and 55: Aggarwal and Zaiane disclose the method of Claim 38 and system of claim 53 respectively, wherein the user activity data comprises user specific item viewing histories. (Aggarwal: Col 2, lines 34-39)

Claims 43, 44, 45, 56, 57, 58: Aggarwal and Zaiane disclose the method of Claim 38 and system of claim 53 respectively, wherein the method comprises causing the set of items to be displayed on the target web site to users who are referred thereto from a referring

web site in said subset of referring web sites. (Aggarwal: Col 8, lines 50-57)

Claims 47 and 60: Aggarwal and Zaiane disclose the method of Claim 38 and system of claim 53 respectively, wherein the set of items is caused to be displayed. While it could be argued that Aggarwal and Zaiane does not teach that a community name associated with said group of users is displayed. The argument would be based upon differences only found in the nonfunctional descriptive material and are not functionally involved in the method (or structurally programmed) steps recited. The steps would be performed the same regardless of data content. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of Patentability, see *In re Gulack*, 703 F.2d 1381, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994). Therefore, it would have been obvious to one of ordinary skill at the time of the invention to have displayed any type of data content in combination with the items. Such data content does not functionally relate to the steps and the subjective interpretation of the data content does not patentably distinguish the claimed invention.

Claims 49 and 63: Aggarwal and Zaiane disclose the method of Claim 38 and system of claim 53 respectively. While it could be argued that Aggarwal and Zaiane do not specifically recite that the subset of referring web sites includes one or more associate web sites. The argument would be based upon differences only found in the nonfunctional descriptive material and are not functionally involved in the method (or structurally programmed) steps recited. The recited steps provide no mechanism by which an associate web site would definitively refer a user to the target web site. Instead, the claim step, based upon Claim 38 from which it depends, is only enabled by mere chance based upon the applicant's disclosure that associate programs are well known (Specification: Page 1, lines 20 – 31). The steps would be performed the same manner regardless of whether the referring site is an associate site as well. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of Patentability, see *In re Gulack*, 703 F.2d 1381, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994). Therefore, it would have been obvious to one of ordinary skill at the time of the invention to have referring websites that turn out to be associates web sites. Such data content does not functionally relate to the steps and the subjective interpretation of the data content does not patentably distinguish the claimed invention.

Claims 51 and 64: Aggarwal and Zaiane disclose the method of Claim 38 and system of claim 53 respectively, wherein the items are available for purchase from the target web site. While it could be argued that Aggarwal and Zaine do not specifically recite that the products disclosed are books. The argument would be based upon differences only found in the nonfunctional descriptive material and are not functionally involved in the method (or structurally programmed) steps recited. The steps would be performed the same regardless of the type of product. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of Patentability, see *In re Gulack*, 703 F.2d 1381, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994). Therefore, it would have been obvious to one of ordinary skill at the time of the invention to have the system recommend any type of product. Such data content does not functionally relate to the steps and the subjective interpretation of the data content does not patentably distinguish the claimed invention.

(10) Response to Argument

- Regarding the applicant's arguments directed towards Claims 46 and 59:

The applicant argues that the rejection of claims 46 and 59 are improper because nothing in the specification or in other statements of record suggests that the step of "causing the set of items to be displayed on a referring web site" needs to be performed in any particular way. However, independent claims 38 and 53 both recite "tracking referrals of users from a referring web site to a target web site that hosts an electronic catalog of items, said referrals resulting from user selection of links provided on the referring web site". Therefore, the user has moved from a referring website to the target website and is no longer interacting with the referring website. Claims 46 and 59 recite causing the subset items to be displayed on the referring website, however, the user is no longer interacting with the referring website since they are interacting with the target website. In order to enable the displaying of the items on the referring website, an essential step in which the user is sent back to the referring site is necessary. Such a step was not considered essential in independent claim 38 prior to the inclusion of dependent claims 46 because the applicants have used an "and/or" clause in the step of causing to display, whereby one of the options recites "causing the set of items to be displayed on the target website to users who have been referred thereto", which represents a clear and understandable progression of steps. The use of the "and/or" clause in the step for causing display indicates that the displaying on a referring website is an

optional step which has not been enabled. As such, no 35 USC 112 rejection has been raised for independent claim 38. However, should the applicant amend the claim to require that the "causing the set of items to be displayed" take place on the referring website then an additional step in which the user is sent back to the referring page would become essential. The applicant also argues that the Final Office Action does not provide a separate basis for the rejection of claim 59. However, as indicated in the Interview Summary, Dated December 27, 2006, the examiner spoke with the applicant regarding both Claim 46 and 59 to clarify this issue. As the applicant is aware, the basis for the rejection is the same for both claims.

- Regarding the applicant's arguments directed towards independent claim 35:

The applicant argues that the Aggarwal reference discloses a process for recommending products to customers of an e-commerce site based on the "products browsed and/or purchased by the customer". However, this argument discounts that fact that the Aggarwal reference discloses in Col 2, lines 49-64 that product characterizations are created based upon the users current online session as well as historical product characterizations for the user. The applicant would like to limit the term "current online session" to include only those browsing behaviors which are performed on the e-commerce site. However, as one of ordinary skill in the art would

realize, the term "current on-line session" is much broader. A broad interpretation of the disclosure includes the tracking of all customer browsing behavior since logging into the internet, which is accomplished via the old and well known techniques of tracking cookies and invisible GIFs. The examiner has used a more narrow interpretation of the disclosure in which the term "current on-line session" would include the browsing information available to the e-commerce site when the customer initiates contact with the site. Such an interpretation is reinforced by Aggarwal's incorporation by reference to application number 09/070600, now patent number 6,307,965 which discloses in Col 7, lines 65-67, that "data values are collected from client computers over the network" as well as by client queries to the server for information in order to obtain information for clustering. Therefore, the examiner has used the analogous teachings of Zaine to teach that providing a target website with information regarding what internet site referred or directed the customer to the target website is well known in the art and represents data collected from the clients computer. Therefore, the examiner in no way acknowledges that Aggarwal clusters users based solely on their product browsing/purchasing activities on the ecommerce site. It is important to note that Aggarwal's patent number 6,307,965 is incorporated by reference into patent number 6,356,879, and as such is an integral part of the original reference. No new art has been introduced. The examiner is

merely providing the applicant with the specific citation in the original reference, which supports the examiner's interpretation of the Aggarwal disclosure of "current online session".

The applicant also asserts that in the Aggarwal disclosure a new user that is initially referred to the e-commerce site from a referring site would not be able to provide recommendations to the user and references Col 8, lines 50-57 as supposedly supporting such a statement. However, the cited section appears to be a misinterpretation of the disclosure. When one looks to Fig 5, which the applicant's citation is describing, one realizes that step 502 is describing a customer database representing all visitors to the website which has been separated into clusters. As one follows the steps outlined in Fig 5 it is obvious that at step 505 the product characterizations of the current on-line session as well as any historical data on the customer is used in step 510 to create a customer characterization that is a weighted concatenation of the two inputs gathered in step 505. When there is no historical data, the weighting for that input would obviously be zero and recommendations would be made solely based upon the user's current online session.

The applicant further argues the motivation for combining the Aggarwal and Zaiane references is not supported by the disclosures in the references. The examiner reminds the applicant that in many, if not most, situations, there is neither a motivation to make the modification clearly

articulated in the references nor an evident lack of motivation. Rather, the prior art references typically disclose elements or aspects of the claimed subject matter, but fail to specifically point the way toward the combination, substitution or other modification needed to arrive at the invention. A judgement must be made whether "a person of ordinary skill in the art would have had sufficient motivation to combine the individual elements forming the claimed invention. Given that Agarwal discloses collecting data from a users computers over a network when determining clusters and that the Zaiane reference details the types of information available from the client's computer, the examiner has formed the judgment that one of ordinary skill in the art would have had sufficient motivation to combine the individual elements.

Finally, the applicant further argues that the proposed combination of Aggarwal and Zaiane would not operate as claimed. However, the Aggarwal disclosure uses both browsing behavior as well as product purchases in determining peer clusters. As the examiner has pointed out the Zaiane reference discloses that collecting information regarding referring websites is well known and such information, would be considered part of the browsing behavior of a current online session disclosed by Aggarwal.

- Regarding the applicant's arguments directed towards independent claim 53.

The applicant argues that the combination of the Aggarwal and Zaiane reference do not fall within the scope of claim 53 because the combination would not include a recommendation service configured to both identify a group of users that have been referred to the target site by a selected subset of the referring sites and identify a set of items that are significantly more popular in the group than in a general user population. However, the cited sections of Aggarwal and Zaiane as well as the motivation to combine presented in the final office action entirely encompass the scope of independent claim 53 as well as independent claim 38. Claim 53 is merely the computer system performing the steps of the method disclosed in Claim 38 and therefore has been rejected utilizing the same cited references in the prior art.

- Regarding the applicant's arguments directed towards dependent claim 39.

The applicant argues that Aggarwal and Zaiane do not disclose the limitation "wherein identifying the set of items comprises programmatically analyzing the collected user activity data of the members and non-members of the group to identify items that are significantly more popular among the group of users than in the general user population". However,

the limitation merely discloses analyzing user activity data of all users (members and nonmembers of the group) to identify items that are more popular among the group (cluster). As stated in the final office action, such a limitation is disclosed in Aggarwal, Col 7, lines 1-55.

- Regarding the applicant's arguments directed towards dependent claim 40.

The applicant argues that Aggarwal and Zaiane do not disclose the limitation "wherein identifying the set of items comprises programmatically analyzing the collected user activity data of the members and non-members of the group to identify items for which the group's preferences are significantly greater than in the general user population". However, the limitation merely discloses analyzing user activity data of all users (members and nonmembers of the group) to identify items for which the group (cluster) has a greater preference (correlation). As stated in the final office action, such a limitation is disclosed in Aggarwal, Col 7, lines 1-55.

- Regarding the applicant's arguments directed towards dependent claims 44, 45, 57 and 58:

The applicant argues that Aggarwal and Zaiane do not disclose the limitation "wherein the method comprises causing the set of items to be

displayed on a page that is initially presented to a user when the user is referred to the target website from a referring web site in said subset of referring web sites". However, Aggarwal discloses the displaying of recommendations to the user in Col 8, lines 50-57. The displayed recommendations in Aggarwal can be displayed on any and/or all pages, including the page initially presented to the user. There is no disclosure in Aggarwal which would prevent the recommendations from being displayed on an initial page. Also, since the user is following links from a referring web page, there is no guarantee that the initial page displayed to a user will be consistent. One referring web page may link directly to a product detail page which contains recommendations. Another referring web page may link with an index page which discloses the types of products and or services of the web site, as well as recommendations for the user.

- Regarding the applicant's arguments directed towards dependent claims 47 and 60.

The applicant argues that a "community name" should be considered functional since this information could be helpful to users in assessing the displayed items and understand why they were selected for display. The applicant uses examples such as "Tiger Woods Fans" and "Golf Enthusiasts". However any title such as "Other people like you also liked the following" wherein the community is "other people like you". While

such titles provide a reference point for the reader of the text regarding the recommendations that follow, any non-functional descriptive text could be used to accomplish the same reference point and no functional effect regarding the types of objects recommended to the user are produced by the incorporation of such a title.

(11) Related Proceeding(s) Appendix

- No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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